10. ENVIRONMENTAL FACILITIES

INTRODUCTION

Environmental facilities are critical to the health, safety and welfare of Atlanta's citizens, and to the City's economic viability and quality. A high quality environment characterizes the vision of the City for all citizens, and should be maintained, enhanced, and protected using the City's environmental facilities and the services they provide.

The environmental facilities element of the comprehensive development plan is divided into three sub elements: (1) Water Supply, (2) Wastewater Systems (Wastewater Treatment, Water Reclamation, Sanitary Sewers, and Storm Drainage), and (3) Solid Waste.

General policies are as follows:

1. Encourage citizen participation in the planning process of environmental facilities and in the development and selection of alternatives.

2. Assist and/or coordinate with federal, state, regional and local agencies to identify and address issues of concern such as water quality, noise, protection of environmentally sensitive areas.

3. Develop environmental impact guidelines for consideration in design and construction of City capital improvements or infrastructure projects.

4. Continue to support monitoring, periodic testing and inspection of City-owned environmental facilities to ensure compliance with federal and state regulations.

In 2002, Mayor Shirley Franklin reorganized the City departments that handle environmental facilities. The new Department of Watershed Management oversees both Water Supply and Wastewater Systems; while the Department of Public Works oversees Solid Waste.

INVENTORY AND ASSESSMENT OF ENVIRONMENTAL FACILITIES

WATER SUPPLY

CURRENT CONDITIONS: WATER SUPPLY

The City of Atlanta's Bureau of Water provides high quality drinking water to the citizens of Atlanta and Fulton County and on a wholesale basis to the cities of Fairburn, Union City, Hapeville, portions of Clayton, Fayette**,** and Coweta Counties (see Table 10-1). Categorically, the City of Atlanta's Bureau of Water supplies water to wholesale, residential, commercial and industrial customers (See Table 10-2). The service area consists of 650 square miles**,** 148,000 connections and serves over one million people daily. The Atlanta Water System is one of the largest water utilities in the Southeast United States.

Table 10-1: Major Wholesale Customers supplied with Drinking Water

Jurisdiction	Contractual Amount (MGD*)	Actual Usage in 2001 (MGD)
Fairburn	1.4	0.435
Union City	1.2	1.11
Hapeville	2.6	1.65
Clayton County	2.6	0.99
Fayette County	4	0.46
Coweta County	2.8	Service began Dec. 2001

Source: City of Atlanta Water Department, 200**2**
*MGD= millions of gallons daily

Table 10-2: Percentage of Water Delivered in 2001 by Customer Type

Customer	% of total
Wholesale	5
Residential	59
Commercial	33
Industrial	3
TOTAL	100

Source: City of Atlanta Water Department, 200**2**

The City's sole source of raw water supply is the Chattahoochee River. The Atlanta Water System consists of two water treatment plants; Hemphill and the Chattahoochee. A third plant is jointly owned and operated by the City and Fulton County. These treatment plants have a combined capacity of approximately 246 million gallons daily (mgd), although average daily demand and production currently stands around 120 mgd.

Since January 1, 1999 the City of Atlanta Water System, (except the jointly owned facility) has been operated under a 20-year contract with United Water Services Atlanta, LLC (contractor), a joint venture between United Water Services and William-Russell and Johnson, Inc., making Atlanta one of the largest contract operated systems in the United States. United Water Services Atlanta is responsible for the operation and maintenance of two water treatment plants-Chattahoochee and Hemphill, transmission and distribution system, customer service, as well as billing and collection functions, with oversight provided by the Bureau of Water. The City retains ownership of the water system's assets, sets water and sewer rates, and manages the Capital Improvement Program. The contractual relationship with United Water Services Atlanta, however, is being mutually dissolved during 2003. The City is establishing a new Bureau of Water and, as of April 28, 2003, will again resume the daily operational and maintenance responsibilities of the City's drinking water system.

Water quality is regulated at both the national and state levels. The Environmental Protection Division of the Georgia Department of Natural Resources analyzes Atlanta's drinking water supply for compliance with established regulations. All regulated contaminants were less than the maximum prescribed by law; unregulated contaminants were not detected in any samples (see Table 10-3). Atlanta's drinking water has an excellent taste and is not in violation of any water quality standards**.**

ANTICIPATED FUTURE CONDITIONS: WATER SUPPLY

According to Atlanta Regional Commission's Regional Water Supply Plan of December 1997, almost 445 million gallons of water per day (mgd) is used in the Atlanta region. By the year 2020, regional water demand is expected to grow by approximately 50 percent from the current level. Based on water demand forecasting, about 10 percent of the water needed in the year 2020 will have to come from conservation. Furthermore, increased water allocations will be needed from Lakes Lanier and Allatoona and from the Chattahoochee and Etowah rivers. In addition, several new reservoirs in the South Metro area are being built. Groundwater can be expected to supply about 5 percent of total future water demand, at most.

The Atlanta Bureau of Water has completed a hydraulic study to determine the system demand needs into the twenty-first century. The recommended project improvements will enable the water system to continue to provide sufficient quantities of properly treated water, at adequate pressure to meet the increasing demands of the region.

The Atlanta Bureau of Water has implemented a comprehensive conservation program which includes leak detection, water main replacement, public awareness, youth education, xeriscape education and consultations, conservation retrofits in the Empowerment Zone, and the distribution of conservation literature and devices. The Care and Conserve Program was implemented in 1995 to assist low-income customers with their bills and water conservation efforts.

CURRENT POLICIES: WATER SUPPLY

1. Maintain an adequate supply of high quality potable water utilizing modern technologies.

2. Improve operations to achieve total customer satisfaction.

3. Continue to remain in full compliance with the Federal Safe Drinking Water Act, the U.S. Environmental Protection Agency lead and copper rule.

4. Promote environmental awareness, conservation and protection of our water resources.

5. Provide sufficient water pressure to assure fire-fighting capabilities and continuance of high standards that result in lower fire insurance rates.

6. Continue to research alternative methods of disinfecting.

7. Enforce a Cross-Connection/Backflow Prevention Program to keep the system free from contamination through containment.

8. Assure the availability of short-term and long-term water resources.

9. Maintain affordable water rates.

10. Develop and implement water conservation education programs.

11. Update the analysis of water system demand based on new ARC population, household and employment forecasts.

The Table 10-3 shows the water quality monitoring results for 1999. The results meet or surpass state and federal drinking water standards. Data for the Information Collection Rule are from 1998.

Table 10-3: Drinking Water Quality Table

Microbiological	MCL	MCLG	Detected Level	Range of Detections	Likely Source
Total Coliform Bacteria	Presence of coliform bacteria in >5% of monthly samples	0	2%	0-2%	Naturally Occurring
Turbidity (NTU)	TT=5 NTU	NA	1.5	-	Soil Runoff
Turbidity (% of samples)	TT=percentage of samples <0.5 NTU	NA	93.6%	-	Soil Runoff
Fluoride (ppm)	4	4	1.4	0.9-1.4	Water Additive
Copper (ppm)	AL=1.3	1.3	0.3	51 samples, no sites were found above the AL	Household Plumbing
Lead (ppb)	AL=15	0	9.2	51 samples, 3 sites were found above the AL	Household Plumbing
Nitrate as Nitrogen (ppm)	10	10	1.0	0.3-1.0	Fertilizer Runoff

Total Coliform Bacteria: highest percentage of positive samples collected in one month
Turbidity: highest single turbidity measurement, and lowest monthly percentage of samples less than 0.5 NTU
Lead and Copper: 90^{th} percentile value of samples collected from the most recent round of sampling
NTU=Nephelometric Turbidity Unit: A measure of the cloudiness of water.
TT=Treatment Technique: A required process intended to reduce the level of contamination in drinking water.
AL=Action Level: The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

2004 CDP ENVIRONMENTAL FACILITIES CURRENT PROGRAMS AND PROJECTS – WATER SUPPLY

Project List 10-1: 2004 CDP Environmental Facilities Current Programs and Projects – Water Supply

WSRE=Water and Sewer Renewal and Extension Fund; WSRB=Water and Sewer Revenue Bond

Environmental Facilities	Description	Initiation Year			Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
1	East Area CSO – Separation – Stockade Phase 2	1	5		2007	71,550	WSRB	DWM	05.18.201	N,W,	1, 2, 5
2	Stockade Trunk Relief & Phase I Separation	1			2005	6,477	WSRB	DWM	05.18.202	N,V,W, Y	2,5
3	RM Clayton - Compliance Upgrades	1	5		2004	22,172	WSRB	DWM	02.17.900	A, C	8, 9
4	Nancy Creek Tunnel	1			2005	148,200	WSRB	DWM	04.26.001	A, B, C	8, 9
5	Nancy Creek Tunnel Pump Station	1			2005	38,300	WSRB	DWM	04.26.002	A,C	8, 9
6	General Sewer Improvements Allowance	1			2003	31,800	WSRB	DWM	04.98.001	L	all
7	Tanyard Creek CSO Relief Improvements Project	1			2005	12,543	WSRB	DWM	05.24.200	E	8
8	Intrenchment Creek CSO – Clean Influent Tunnel		5		2004	3,180	WSRB	DWM	05.87.301	W	1
9	RM Clayton - Administration Building Upgrades - Additional Funds		5		2010	10,600	WSRB	DWM	02.17.010	A, C	8, 9
10	RM Clayton – Small Capital Projects		5		2007	6,360	WSRB	DWM	02.17.901	A,C	8, 9
11	Greenway Acquisition (Purchase)		5		2007	12,720	WSRB	DWM	05.09.006	all	all
12	Butler Street/Highland Avenue Trunk Relief		5		2004	5,300	WSRB	DWM	05.94.001	M	6
13	Annual Contract – Inspection and Flow Monitoring Contract (2004-2005)	1	5		2005	11,183	WSRB	DWM	08.04.004	all	all
14	North Stratford Outfall		5		2005	10,000	WSRB	DWM	n.i.	B	7
15	Sewer Maintenance Division Facility	1	5		2005	3,200	WSRB	DWM	n.i.	G	9
16	Utoy Creek - Phase 2A (Contract 2) Administration/Laboratory Building	1			2004	22,289	WSRB	DWM	02.15.200	H	10
17	South River - Compliance Upgrades	1	5		2005	6,360	WSRB	DWM	02.18.900	Z	12
18	SSES - Group 1 - Contract A	1			2004	9,710	WSRB	DWM	04.16.001	B, C, E, F	7, 8
19	SSES - Group 1 - Contract B	1			2004	7,098	WSRB	DWM	04.16.002	Y	1
20	SSES - Group 1 - Contract C	1			2004	7,785	WSRB	DWM	04.16.003	I, P, R, S	10, 11, 12
21	SSES - Group 1 - Contract D	1			2004	5,408	WSRB	DWM	4.164	H, I, J	9, 10
22	Rehabilitation - Group 1	1	5		2007	21,272	WSRB	DWM	04.16.200	all	all

Environmental Facilities	Description	Initiation Year			Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
23	SSES - Group 2	1			2007	23,678	WSRB	DWM	04.17.001	all	all
24	CSO Consolidated Storage Tunnels - West Tunnel	1	5		2007	336,688	WSRB	DWM	05.13.001	C, D, E, F, G, J, K,	3, 6, 8, 9
25	CSO Consolidated Storage Tunnels - East Tunnel	1	5		2007	121,,889	WSRB	DWM	05.14.001	W, Y,	1
26	CSO – West Area CSO Treatment Plant	1	5		2007	80,836	WSRB	DWM	05.15.001	A, C	8, 9
27	CSO – Intrenchment Creek CSO Treatment Plant Upgrades	1	5		2007	38,785	WSRB	DWM	05.16.001	Y, Z	12
28	CSO - Intrenchment Creek WRC Capacity Expansion	1	5		2007	27,666	WSRB	DWM	05.25.001	Y, Z	12
29	West Area CSO - Partial Separation - Greensferrry	1	5		2007	60,208	WSRB	DWM	05.17.400	K, L, T	4
30	East Area CSO - Partial Separation - McDaniel	1	5		2007	43,142	WSRB	DWM	05.18.100	T, V, X	4, 12
31	CSO - De-chlorination Upgrades at CSO's - West	1	5		2007	3,880	WSRB	DWM	05.19.001	E, F, K	3, 6
32	CSO - De-chlorination Upgrades at CSO's - East	1	5		2007	1,049	WSRB	DWM	05.20.001	W	1
33	Capacity Relief/Repairs to existing Combined Sewers – East & West	1	5		2007	150,202	WSRB	DWM	05.24.001	D, E, F, K, L, M, N, T, V, W, Y	1, 2, 3, 4, 5, 6, 7, 8
34	Tanyard West Area Disinfection Project	1			2005	4,452	WSRB	DWM	05.04.003	E	2, 8
35	Watershed Master Plan	1			2004	3,500	WSRB	DWM	05.28.001	all	all
36	Utoy Creek - Furnishing of Administration/Laboratory Building	1			2004	1,962	WSRB	DWM	02.15.003	H	10
37	Relief Sewer - Group 1		5	15	2008	104,167	WSRB	DWM	04.16.300	all	all
38	Rehabilitation - Group 2		5		2010	19,146	WSRB	DWM	04.17.200	all	all
39	Relief Sewers - Group 2		5	15	2010	93,752	WSRB	DWM	04.17.300	all	all
40	SSES - Group 3		5		2007	22,371	WSRB	DWM	04.18.001	all	all
41	Rehabilitation - Group 3		5		2010	18,083	WSRB	DWM	04.18.200	all	all
42	Relief Sewers - Group 3		5	15	2010	88,543	WSRB	DWM	04.18.300	all	all
43	SSES - Group 4		5		2008	21,054	WSRB	DWM	04.19.001	all	all
44	Rehabilitation - Group 4		5	15	2012	17,018	WSRB	DWM	04.19.200	all	all
45	Relief Sewers - Group 4		5	15	2011	83,333	WSRB	DWM	04.19.300	all	all
46	SSES - Group 5		5		2010	19,738	WSRB	DWM	04.20.001	all	all
47	Rehabilitation - Group 5		5	15	2013	15,955	WSRB	DWM	04.20.200	all	all
48	Relief Sewers - Group 5			15	2012	78,127	WSRB	DWM	04.20.300	all	all
49	SSES - Group 6		5		2010	18,424	WSRB	DWM	04.21.001	all	all
50	Rehabilitation - Group 6			15	2014	14,891	WSRB	DWM	04.21.200	all	all

Environmental Facilities	Description	Initiation Year			Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
51	Relief Sewers - Group 6			15	2013	72,918	WSRB	DWM	04.21.300	all	all
52	McDaniel Street Landscaping		5		2007	1,244	WSRB	DWM	05.87.101	X	12
53	Sewer Separation - Long Term			15	2012	300,000	WSRB	DWM	05.91.001	D, E, F, K, L, M, N, S, T, V, W, X	1, 2, 3, 4, 5, 6, 7, 8, 12
54	Overall Watershed Long Term Monitoring		5		2007	7,952	WSRB	DWM	06.0D.2B0	D, E, F, K, L, M, N, S, T, V, W, Y	1, 2, 3, 4, 5, 6, 7, 8
55	Bio-Solids Project		5		2009	53,603	WSRB	DWM	07.79.001	all	all
56	Proctor/Sandy Creek System Improvements		5		2006	11,037	WSRB	DWM	09.01.901	K	9, 10
57	IC & SR - Effluent Forcemain Assessment & Establishment of Permanent ROW		5		2006	2,418	WSRB	DWM	09.04.001	W, Z	12
58	WRC – Metro Limits Upgrade – Design Development – Allowance	1	5		2005	3,244	WSRB	DWM	02.00.901	all	all
59	Inman Park – Rehab Project	1			2004	1,328	WSRB	DWM	05.95.001	N	2
60	RM Clayton – Temporary Facilities – Trailers	1			2004	532	WSRB	DWM	02.17.011	A, C	8, 9
61	R.M. Clayton – Temporary Facilities – Remodel Lab	1			2004	532	WSRB	DWM	02.17.012	A, C	8, 9
62	R.M. Clayton – Backup Power Generator	1	5		2005	24,232	WSRB	DWM	02.17.040	A, C	8, 9
63	South River – Backup Power Generator for Final Effluent Pump Station	1	5		2005	2,692	WSRB	DWM	02.14.040	Z	12

2004 CDP ENVIRONMENTAL FACILITIES NEW, COMPLETED, and DELETED PROGRAMS AND PROJECTS – WATER SUPPLY

Project List 10-2: 2004 CDP Environmental Facilities New Programs and Projects – Water Supply

WSRE=Water and Sewer Renewal and Extension Fund; WSRB=Water and Sewer Revenue Bond

Environmental Facilities Description	Initiation Year			Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
Intrenchment Creek – Small Capital Projects	1	5		2007	6,360	WSRB	DWM		W	1
Pump Station – Operational Upgrades	1	5		2007	21,200	WSRB	DWM	03.06.901	X, Z, H	10, 12
Vine Street/ Rock Street Relief	1	5		2007	69,510	WSRB	DWM	05.92.004	K,L	3
Monroe Circle Relief Project and Other Improvements	1	5		2007	13,534	WSRB	DWM	05.92.005	E, M, N	2, 6
Annual Contract – Small Diameter (2004-2005)	1	5		2005	44,732	WSRB	DWM	08.04.001	all	all
Annual Contract – Large Diameter (2004-2005)	1	5		2005	44,732	WSRB	DWM	08.04.002	all	all
Annual Contract – Find and Fix Contract (2004-2005)	1	5		2005	44,732	WSRB	DWM	08.04.003	all	all
Utoy Creek – Small Capital Projects	1	5		2005	6,360	WSRB	DWM	02.19.904	H	10
Flint River Transmission Main Improvements – 30” Dia – Phase I	1			2007	6,000	WSRB	DWM	09.02.004	Z	2
Flint River Transmission Main Improvements – 24” Dia – Phase II		5		2007	14,000	WSRB	DWM	09.02.005	Z	2
Flint River Transmission Main Improvments – 18” Dia – Phase III		5		2007	18,000	WSRB	DWM	09.02.006	Z	2
South River --Small Capital Projects	1	5		2005	6,360	WSRB	DWM	02.19.902	H	O
Renovate James Walker Sewer Facility (Englewood) & North Side Site at Liddel	1			2005	3884	WSRB	DWM			
Reonovate City Hall South/East Annex	1			2005	5901	WSRB	DWM			
RM Clayton--Metro Limits Upgrade		5		2006	10,000	WSRB	DWM		A,C	8, 9
RM Clayton - Primary Area Upgrades		5		2006	10,000	WSRB	DWM		A,C	8, 9

Environmental Facilities Description	Initiation Year			Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
RM Clayton - Blower Building Improvements		5		2008	3,384	WSRB	DWM		A,C	8, 9
RM Clayton - Utility Tunnel & Utility Improvements		5		2008	3,228	WSRB	DWM		A,C	8, 9
SR & IC - Metro Limits for Current Flows		5		2006	10,845	WSRB	DWM		W, Z	12
SR & IC - Metero Limits to Plant Capacity		5		2008	17,233	WSRB	DWM		W, Z	12
SR & IC - Upgrade for Reuse and Nitrogen Limits		5		2010	63,500	WSRB	DWM		W, Z	12
SR & IC - Upgrade to 110 MGD			15	2015	285,000	WSRB	DWM		W, Z	12
Utoy Creek - Upgrade for Metro Limits		5		2008	25,000	WSRB	DWM		H	10
Utoy Creek - Expand Plant to 54 MGD Capacity			15	2020	30,000	WSRB	DWM		H	10
Replace BR & PL Pump Stations			15	2020	47,000	WSRB	DWM		X, Z, H	

Project List 10-3: 2004 CDP Environmental Facilities Completed Programs and Projects – Water Supply

Environmental Facilities	Description	NPU	CD
1	CSO Separation Pre-Design	Citywide	Citywide
2	Atlantic Steel Separation		
3	Rivers Road Pilot Study	B	8
4	Demolition of Water Steam Plant	A	8
5	Carver Homes – Atlanta Housing Development	Y	12
6	Tenth Ward Relief and Rehabilitation Phase I	Z	12
7	Tenth Ward Relief and Rehabilitation Phase II	Z	12
8	Tenth Ward Relief and Rehabilitation Phase III	Z	12
9	Tenth Ward Relief and Rehabilitation Phase V	Z	12
10	Indian Creek – Phase 1 & 2	B	7
11	Orme Street – Phase III	E	2, 7
12	Veterans Hospital Trunk Sewer	B	7
13	Peachtree Trunk—South Fork	F	6

WASTEWATER SYSTEMS

The City of Atlanta and the surrounding region have grown tremendously in the last 100 years. While growth is essential to maintaining economic vitality, it needs to enhance and blend with the environment. As the region grows, the demand on existing infrastructure increases, and we are faced with greater challenges in managing wastewater and stormwater, and in protecting our rivers and streams.

A comprehensive coordinated program is currently underway to protect streams and rivers, and the general public from pollutants found in wastewater. This program includes an unprecedented number of environmental program initiatives involving Atlanta's water reclamation centers and sewer and storm drainage systems. By eliminating water quality violations caused by combined sewer (CSO) and sanitary sewer overflows (SSO), as well as providing a higher level of treatment at City Wastewater facilities, Atlanta is making lasting, positive changes in the way we impact the environment.

CURRENT CONDITIONS: WASTEWATER SYSTEMS

Atlanta's wastewater and stormwater systems, like those in many other older American cities, have evolved over time. More than 100 years ago, wastewater from homes and stormwater that fell on roads and rooftops was diverted directly to streams without treatment. As the streams became polluted, they were covered or diverted to pipes. Pipes that collect both stormwater and wastewater are called *combined sewers.* Atlanta's combined sewer system is located in the central part of Atlanta. Outside the area serviced by the combined sewer system, the sanitary sewer and storm drainage systems are separate.

Not long after the turn of the century, wastewater treatment facilities were built to collect and treat the flow from these combined sewers, which during dry weather, is virtually all wastewater. But during wet weather, the volume of stormwater can be too great for the small pipes and facilities. So overflows were placed in the pipes to allow unusually high flows to be discharged into streams before they reached the treatment facilities. These overflow points are called *combined sewer overflows (CSOs).* The City has seven CSO points and includes Tanyard Creek, Greensferry, Clear Creek, North Avenue, McDaniel Street, Intrenchment Creek, and Custer Avenue.

The City's Division of Wastewater Services operates four water reclamation centers (WRCs) which service Atlanta, portions of Decatur, East Point, Hapeville, Forest Park, College Park and certain unincorporated areas of Fulton, and DeKalb Counties. These plants are the R. M. Clayton, Utoy Creek, Intrenchment Creek and South River Water Reclamation Centers (see Map 10-1 and Map 10-2). A small portion of southwest Atlanta is serviced by the Camp Creek plant, which is operated by Fulton County. Table 10-4 provides capacity volumes for each WRC and shows volume of wastewater treated each year from 1990 to 2000.

Table 10-4: Average Annual Flow for City of Atlanta WRCs (MGD)

Year	R.M. Clayton WRC (Capacity = 122 mgd)	South River and Intrenchment Creek WRC (Capacity = 54 mgd)	Utoy Creek WRC (Capacity = 44 mgd)
1990	82.3	39.2	29.8
1991	84.3	39.6	27.8
1992	82.4	40.6	30.8
1993	81.4	39.9	31.4
1994	75.7	41.7	32.6
1995	76.8	43.2	32.3
1996	88.5	49.3	35.5
1997	76.0	42.3	32.7
1998	80.5	39.3	29.8
1999	75.3	33.3	25.6
2000	73.5	30.6	26.3

Source: City of Atlanta Wastewater Services Division
Notes: Volumes based on annualized average daily flow, in million gallons per day (mgd).
Intrenchment Creek Plant operations are included in South River Plant operation statistics.

The newly created Department of Watershed Management is responsible for construction and maintenance of over two thousand miles of sanitary and combined sewer facilities, as well as over sixty thousand drainage structures. Map 10-1 depicts Atlanta's drainage basins and major rivers and streams. There are 15 drainage basins in the City of Atlanta. They include Peachtree, Utoy, Nancy, Long Island, Proctor, Terrell, Sandy, Indian, Camp, Intrenchment, Sugar, Federal Prison, South Fork and North Fork of Peachtree Creeks, and South River basins. To date, the inventory and master plans of 10 of them have been completed. These represent 111 square miles, which is 83% of the entire city. As funding becomes available, it is the intent of the City to complete the remaining basins over the next 4 years. To date, at least 30% of the projects identified within the study has either been constructed or is in the process.

Some older neighborhoods in North Atlanta were developed with septic tanks. As those tanks age, some are reaching the end of their usable life of approximately forty-five years and are failing. Storm sewer facilities consist, for the most part, of catch basins and discharge piping into the receiving stream. The majority of structures do not have grates and traps, and often times the receiving stream becomes polluted with roadside debris, litter and oil residue from direct discharge into the stream. Other drainage facilities include culverts and open channels. Storm drainage of Atlanta's central area is through the combined storm and sanitary sewer system.

Outside the central combined sewer area, the sanitary sewer system consists of pipes that convey wastewater via gravity and pump stations to the WRCs for treatment. The sanitary sewer system sometimes overflows causing sanitary sewer overflows (SSOs). These SSOs are cause by inflow and infiltration of stormwater into the sanitary system as well as capacity issues.

Federal regulations mandate that all major municipalities must make a formal application to the EPA for a permit to discharge stormwater to the nations' creeks and rivers. As part of its joint application with other governments in the Atlanta region, the City submitted a detailed listing of all its major discharge outfall lines, together with a comprehensive stormwater management plan. The City has submitted both the Part 1 and Part 2 applications within the required deadlines. Both of these documents have been approved and the City was issued a National Pollutant Discharge Elimination System (NPDES) permit in 1994. Since then, the City has met its entire permit obligation and is in full compliance with its EPA regulations.

ANTICIPATED FUTURE CONDITIONS: WASTEWATER SYSTEMS

The Atlanta Regional Commission uses adopted forecasts for households, population and employment trends, to determine wastewater flow projections. Currently available projections are listed for the four City wastewater treatment plants (see Table 10-5).

Improvements to the water reclamation centers (WRCs) are required by Senate Bill 500, the 1999 First Amended Consent Decree, and NPDES permits. To date, all Senate Bill 500 deadlines have been met. NPDES permit and 1999 First Amended Consent Decree deadlines have been met.

Table 10-5: Wastewater Flow Forecasts, 2000-2020

Wastewater Treatment Plant	Annual Average Flow (mgd)			Monthly Maximum Flow (mgd)		
	2000	2010	2020	2000	2010	2020
RM Clayton	82	100	103	95	113	122
Utoy Creek	32	33	36	41	42	44
South River and Intrenchment Creek	38	38	42	49	51	54
Total	152	171	181	185	206	220

Source: City of Atlanta Wastewater Services Division
Notes: Volumes based on annualized average daily flow, in million gallons per day (mgd).
Intrenchment Creek Plant operations are included in South River Plant operation statistics.

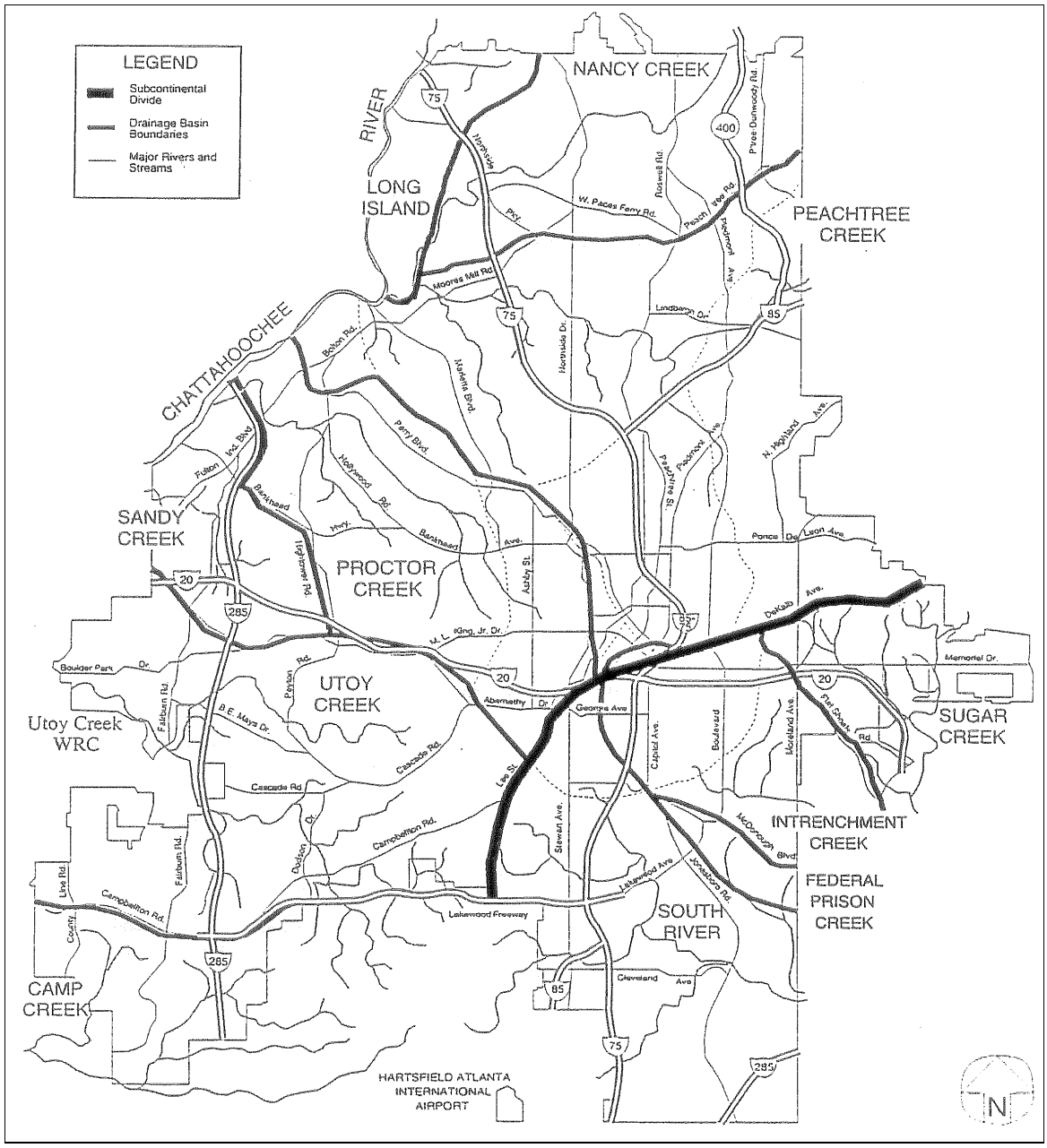
Major capital improvements have been constructed at the South River, Intrenchment Creek**,** R. M. Clayton and Utoy Creek Water Reclamation Centers to provide for operation at full capacity at the present permitted effluent concentration levels. The Georgia Environmental Protection Division will be tightening the NPDES effluent limits in 2004. The City is currently evaluating the impact of the new regulations on the ability of the water reclamation centers to meet the new standards.

Currently, no comprehensive projections are available for future impacts on the City's sanitary sewer and drainage systems. A Master Plan for the City Water and Wastewater System is getting underway. Basin studies, currently underway, will identify problems and

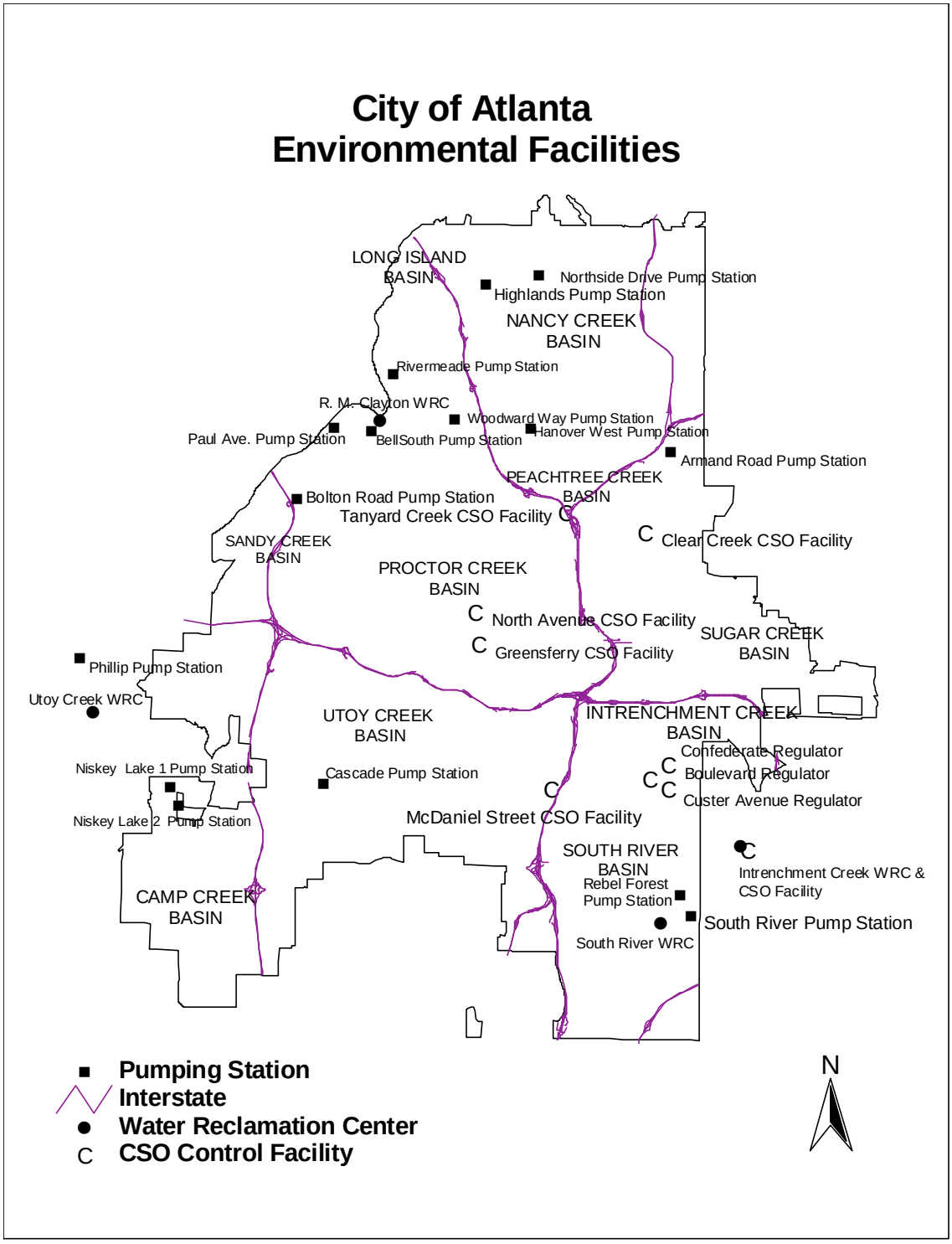
potential solutions. These studies are focusing on projected high growth areas in North and West Atlanta, which are outside of the combined sewer area. Repairs to the sanitary sewer system are ongoing to address capacity concerns. No building permits can be issued for new construction unless the City can certify that sanitary sewer capacity is available to accommodate the new construction.

A comprehensive repair and capacity improvement program will begin in 2001 for the combined sewer system. Improvements are intended to relieve stormwater flooding and to provide adequate capacity through 2020.

Map 10-1: Drainage Basins and Major Rivers and Streams



Map 10-2: City of Atlanta Environmental Facilities



CURRENT POLICIES: WASTEWATER SYSTEMS

1. Continue compliance with established state and federal regulations for wastewater treatment.

2. Continue to support operational programs and implementation of capital projects, which facilitate compliance with mandated treatment levels.

3. Continue implementation of improvements to the City's wastewater treatment plants in order to assure that permitted capacity is available to accommodate future wastewater treatment demand.

4. Develop and implement pollution prevention programs to reduce pollutants in stormwater runoff and wastewater discharge.

5. Provide sufficient treatment plant capacity to accommodate future service area needs.

6. Support all efforts for industrial and commercial pre-treatment programs to comply with state and federal regulations.

7. Provide for odor control at all four water reclamation centers as needed**.**

8. Support the Citizen Stream Monitoring Program and the City's Adopt-a-Stream program to encourage education and participation of citizens and businesses in the prevention of non-point source pollution of surface water.

9. Design and upgrade wastewater treatment plants with appropriate buffers so as to mitigate any adverse environmental impacts upon surrounding land uses.

10. Implement strategy for beneficial reuse of bio-solids and treated effluent at the Water Reclamation Centers.

11. Comply with all applicable regulations concerning bio-solids, water reuse and effluent disposal.

12. Provide adequate capacity for wastewater flow from developed and developing areas.

13. Support recommendations that wastewater infrastructure for single identifiable developments or clusters of developments should be developer financed.

14. Assure sufficiency of funds through review of demand on the Water and Sewer Revenue Fund.

15. Maintain the environmental integrity of sewer outfall easements.

16. Support the recommendations of the sanitary sewer basin studies and implement the recommended improvements of the sanitary sewer basin studies, focusing on the combined sewer areas, which have the oldest sewer pipes.

17. Implement sewer projects, which address capacity and structural deficiencies and ground water infiltration/exfiltration.

18. Continue and enhance programs of sewer condition monitoring and system renovation to assure system integrity.

19. Continue to expand the sewer system to include areas currently served by septic tanks as the affected residents' request that expansion.

20. Support the recommendations of the City of Atlanta Drainage Basin Study.

21. Reduce impacts of stormwater through the construction and maintenance of drainage facilities such as detention/retention basins, storm sewers, infiltration areas, stream bank protection, and wetland creation.

22. Finance and set a target date for the completion of the City of Atlanta Drainage Basin Study in order to determine citywide priorities and the level of cost effectiveness for various recommended projects.

23. Establish a dedicated funding source for drainage improvements. Alternatives could include: general obligation bond; dedicated millage rate; or a stormwater utility.

24. Adopt and implement a funding alternative in order to proceed with a comprehensive drainage improvement program.

25. Determine and implement Best Management Practices (BMPs) with regard to watershed, floodplains and wetlands protection.

26. Provide staff and resources to regulate and monitor stormwater discharges and provide public education consistent with the National Pollutant Discharge Elimination System Regulations as mandated by the U.S. Environmental Protection Agency (Federal Register CFR 122 through 124, November 16, 1990).

27. Maintain and implement stream bank protection measures.

28. Continue to support the Citizen Stream Monitoring Program to encourage citizen and business education and participation in prevention of non-point source pollution.

29. Support and lobby for legislation that requires Best Management Practices (BMPs) to reduce stormwater run-off volumes and improve stormwater run-off quality into the City's drainage infrastructure and natural drainage system.

30. Investigate the use of bioengineering techniques to restore eroded stream banks.

31. Work with the U.S. Army Corps of Engineers and the surrounding jurisdictions to complete and implement the Metro Atlanta Watershed Studies.

CURRENT PROGRAMS AND PROJECTS: WASTEWATER SYSTEMS

1. The 1998 Federal Consent Decree commits the City of Atlanta to a program of activities designed to further improve water quality in Metro Atlanta streams and the Chattahoochee and South Rivers. The Consent Decree includes specific actions the City will undertake to improve CSO facilities and a Supplemental Environmental Project (SEP), which has two primary components: the Greenway Acquisition Project and the Metro Atlanta Stream Cleanup Project.

2. The 1999, First Amended Consent Decree commits the City to make improvements to the water reclamation centers (WRCs), the sanitary sewer system and pump stations. Much of the work mandated in the First Amended Consent Decree builds on City programs already underway, including activities associated with assessment of current sewer line conditions and management plans to operate the collection system more effectively.

3. The U.S. Army Corps of Engineers General Investigation Program, authorized by House Resolution 2445 of the Committee on Public Works and Transportation of the United States House of Representatives, is currently conducting feasibility phase studies on the Metro Atlanta Watersheds, Peachtree, Nancy, Utoy, Sandy, and Proctor Creeks. The purpose of the feasibility phase studies is to develop and evaluate alternatives for implementing solutions to water resource problems. The U.S. Army Corps of Engineers, Mobile District, and the non-Federal sponsors including the City of Atlanta, DeKalb County, and Fulton County have all developed this project management plan as a cooperative effort.

4. The Department of Watershed Management is implementing a plan for a long-term sewer system evaluation program (SSES), which will enable it to prioritize future rehabilitation and capital improvement projects as well as certify capacity.

5. Ongoing implementation of completed City of Atlanta Drainage Basin study recommendations.

6. In an ongoing effort to extend the life of existing pipes, the annual Cured-in-Place Pipe Contract is allotted monies each year to repair pipes to reduce infiltration and inflow of stormwater. In 2000, 69,400 feet of pipe were repaired under this contract at a cost of $4.4 million. In 2001, a minimum of 100,000 feet of pipe is expected to be repaired at a cost of approximately $7.5 million. The Cured-in- Place process adds 50 years to the life of the existing pipe.

7. The Rivers Road Pilot Study was undertaken in 2001 and is to serve as a model for the larger Sanitary Sewer Overflow (SSO) project under the 1999 First Amended Consent Decree. The Rivers Road study area was selected because it is deemed to be one of the worst areas in the City of Atlanta for infiltration and inflow (I&I). The study area will receive approximately 5,000 feet of pipe bursting and approximately 5,000 feet of cured-in-place rehabilitation. The goal of this project is demonstrate the ability to reduce I&I throughout a sewer mini-basin through the use of the above techniques in a comprehensive fashion. Additionally, the City hopes to provide the blueprint for an all-encompassing sanitary sewer rehabilitation project that can enlist neighborhood cooperation. When completed, the project will provide valuable information for future projects on such factors as cost, time, and degree of neighborhood distribution.

2004 CDP ENVIRONMENTAL FACILITIES CURRENT PROGRAMS AND PROJECTS – WASTEWATER SYSTEMS

Project List 10-4: 2004 CDP Environmental Facilities Current Programs and Projects – Wastewater Systems

WSRE=Water and Sewer Renewal and Extension Fund; WSRB=Water and Sewer Revenue Bond

	Environmental Facilities Description	Initiation Year 1	5	15	Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
	R.M. Clayton - Landscaping Improvements	1	5		9/17/2006	3,180	WSRB	DWMDWM	02.17.020	C	9
	RM Clayton - Compliance Upgrades	1	5		10/18/2006	22,172	WSRB	DWMDWM	02.17.900	A, C	9
	Nancy Creek Tunnel	1			11/21/2005	148,200	WSRB	DWM	04.26.001	B, C	8

Environmental Facilities Description		Initiation Year 1	5	15	Completion Year	Cost X 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
	Nancy Creek Tunnel Pump Station	1			2005	38,300	WSRB	DWM	04.26.002	B, C	8
	General Sewer Improvements Allowance	1			12/31/2003	30,000	WSRB	DWM	04.98.001	L	all
	Tanyard Creek CSO Relief Improvements Project	1			2/13/2005	11,833	WSRB	DWM	05.24.200	F, M	2, 7, 8
	Intrenchment Creek CSO – Clean Influent Tunnel	1			7/1/2004	3,000	WSRB	DWM	05.87.301	W	1
	R.M Clayton - Administration Building Upgrades - Additional Funds		5		8/13/2007	7,000	WSRB	DWM	02.17.010	A, C	8, 9
	RM Clayton - Safety Upgrades		5		7/19/2007	2,856	WSRB	DWM	02.17.901	A, C	8, 9
	Greenway Acquisition		5		3/31/2007	12,720	WSRB	DWM	05.09.006	all	all
	Butler Street/Highland Avenue Trunk Relief - Phase I		5		12/29/2004	40,851	WSRB	DWM	05.94.001	M	6
	Butler Street/Highland Avenue Trunk Relief - Phase II		5		10/25/2005	38,000	WSRB	DWM	05.94.002	M	6
	North Stratford Outfall		5		2005	10,000	WSRE	Dept. of Public Works	n.i.	B	7
	Orme Street Trunk Relief Phase III		5		2005	20,000	WSRE	Dept. of Public Works	SE-034	M	2
	Sewer Maintenance Division Facility	1	5		2005	3,200	WSRE	Dept. of Public Works	n.i.	G	9

2004 CDP ENVIRONMENT FACILITIES COMPLETED PROGRAMS AND PROJECTS – WASTEWATER SYSTEMS

Project List 10-5: 2004 CDP Environment Facilities Completed Programs and Projects – Wastewater Systems

Environmental Facilities	Description	NPU	CD
	CSO Separation Pre-Design	Citywide	Citywide
	Atlantic Steel Separation		
	Rivers Road Pilot Study	B	8
	Demolition of Water Steam Plant	A	8
	Carver Homes – Atlanta Housing Development		
	Tenth Ward Relief and Rehabilitation Phase I	Z	12
	Tenth Ward Relief and Rehabilitation Phase II	Z	12
	Tenth Ward Relief and Rehabilitation Phase III	Z	12
	Tenth Ward Relief and Rehabilitation Phase V	Z	12
	Indian Creek – Phase 1 & 2	B	7
	Orme Street – Phase III	E	2, 7
	Veterans Hospital Trunk Sewer	B	7
	Peachtree Trunk – South Fork	F	6

2004 CDP ENVIRONMENTAL FACILITIES NEW PROGRAMS AND PROJECTS – WASTEWATER SYSTEMS

Project List 10-6: 2004 CDP Environmental Facilities New Programs and Projects – Wastewater Systems

WSRE=Water and Sewer Renewal and Extension WSRE=Water and Sewer Renewal and Extension Fund; WSRB=Water and Sewer Revenue Bond

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
1	Utoy Creek - Phase 2A (Contract 2) Administration/Laboratory Building	1			12/11/2004	21,027	WSRB	DWM	02.15.200	H	10
2	South River - Compliance Upgrades	1	5		8/25/2005	8,280	WSRB	DWM	02.18.900	Z	12
3	UC - Compliance Upgrades	1	5		3/21/2005	3,576	WSRB	DWM	02.19.900	H	0
4	River Road Pilot Study	1			12/31/2003	4,805	WSRB	DWM	04.13.001	B	7
5	SSES - Group 1 - Contract A	1			6/13/2004	9,710	WSRB	DWM	04.16.001	B, C, E, F	7, 8
6	SSES - Group 1 - Contract B	1			6/19/2004	7,098	WSRB	DWM	04.16.002	Y, Z	12
7	SSES - Group 1 - Contract C	1			6/19/2004	7,785	WSRB	DWM	04.16.003	I, P, R, S	10, 11, 12
8	SSES - Group 1 - Contract D	1			6/19/2004	5,408	WSRB	DWM	04.164	H, I, J	9, 10
9	SSES - Sewer Group 1 - Additional Required Funding	1			10/18/2007	10,000	WSRB	DWM	04.16.005	all	all
10	Rehabilitation - Group 1	1	5		10/18/2007	20,068	WSRB	DWM	04.16.200	all	all
11	SSES - Group 2	1			3/9/2007	22,345	WSRB	DWM	04.17.001	all	all
12	Carver Homes - Atlanta Housing Development	1			3/1/2002	3,680	WSRB	DWM	04.90.001	Y	12

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
13	CSO Consolidated Storage Tunnels - West Tunnel	1	5		10/7/2007	367,714	WSRB	DWM	05.13.001	B, C, D, E, F, G, J, K, M	6, 7, 8, 9
14	CSO Consolidated Storage Tunnels - East Tunnel	1	5		10/31/2007	94,286	WSRB	DWM	05.14.001	V, W, X, Y, Z	, 4, 12
15	CSO - New CSO Treatment Plant	1	5		7/10/2007	50,000	WSRB	DWM	05.15.001	Y, Z	9
16	CSO - Intrenchment Creek WRC Upgrade & Conveyance Pipeline/Storage	1	5		1/7/2006	84,000	WSRB	DWM	05.16.001	Y, Z	12
17	West Area CSO - Partial Separation - PH 1 - Clear Creek	1	5		3/29/2007	13,496	WSRB	DWM	05.17.100	F, M, N, W	, 6
18	West Area CSO - Partial Separation - PH 1 - Tanyard	1	5		2/26/2007	8,230	WSRB	DWM	05.17.200	E, M	7, 8
19	Atlantic Steel Separation Above Tanyard Basin	1			2/26/2007	1,770	WSRB	DWM	05.17.201	E	2
20	Atlantic Steel Separation Project (Lower Section) - Tanyard Basin	1			10/2/2007	10,000	WSRB	DWM	05.17.202	E	2
21	West Area CSO - Partial Separation - PH 1 - North Ave	1	5		3/10/2007	27,157	WSRB	DWM	05.17.300	L, M, T	, 4
22	West Area CSO - Partial Separation - PH1 - Greensferrry	1	5		9/27/2007	18,008	WSRB	DWM	05.17.400	L, T	4
23	CSO SSES & Mapping - Pre-Design	1			6/3/2002	5,000	WSRB	DWM	05.18.001	E, F, K, L, M, N, O, V, W, Y	all
24	East Area CSO - Partial Separation - PH1 - McDaniel	1	5		4/18/2007	34,155	WSRB	DWM	05.18.100	T, V, X	4, 12
25	East Area CSO - Partial Separation - PH1 - Custer	1	5		6/8/2007	92,954	WSRB	DWM	05.18.200	N, V, W, Y	2, 5

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
26	CSO - De-chlorination Upgrades at CSO's - West	1	5		8/12/2005	7,500	WSRB	DWM	05.19.001	M, S, T, V, X	7, 8, 12
27	CSO - De-chlorination Upgrades at CSO's - East	1	5		8/12/2005	7,500	WSRB	DWM	05.20.001	W	6
28	Point Fixes, Capacity Upgrades in Combined Area	1	5		7/2/2007	131,167	WSRB	DWM	05.24.001	V, W, Y	6, 7, 8, 12
29	Long Term Wastewater System Master Plan	1			7/10/2003	3,500	WSRB	DWM	05.28.001	all	all
30	MWH/Khafra Program Management Year 2002 - Year 2003 - Capital Projects	1			5/1/2003	11,324	WSRB	DWM	06.02.901	S, T, W, X, Y	2, 3, 4, 5, 6, 7, 8, 12
31	MWH/Khafra Program Management Year 2002 - Year 2003 - Capital Projects	1			5/1/2003	15,840	WSRB	DWM	06.02.904	all	all
32	MWH/Khafra Program Management Year 2001 - Capital Projects	1			5/2/2002	22,618	WSRB	DWM	06.02.914	all	all
33	City Hall East Renovations	1			4/28/2015	6,000	WSRB	DWM	06.0A.7B0	F	6
34	City Program Management Staff - Year 2002 to Year 2003 - Capital Projects	1			1/1/2003	613	WSRB	DWM	99.01.005	D, E, F, K, L, M, N, S, T, V, W, X, Y	1, 2, 3, 4, 5, 6, 7, 8, 12
35	City Program Management Staff - Year 2002 to Year 2003 - Capital Projects	1			1/1/2003	587	WSRB	DWM	99.01.009	all	all
36	Utoy Creek - Furnishing of Administration/Laboratory Building	1			12/11/2004	1,850	WSRB	DWM	02.15.003	H	0

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
37	Implementation of Instrument Calibration System		5		11/11/2007	400	WSRB	DWM	02.16.001	all	all
38	Implementation of Pressure Vessel (PV) Inspection Program		5		12/11/2007	500	WSRB	DWM	02.16.002	all	all
39	General Accounting Standards Board (GASB) No. 34 - Supply Info to Program Coordinator		5		11/26/2007	500	WSRB	DWM	02.16.003	all	all
40	South River - Access Road & Buffer (Purchase of Trailer Park)		5		1/15/2007	6,000	WSRB	DWM	02.18.020	Z	12
41	South River - Landscape Improvements and Access Trails		5		1/15/2007	5,000	WSRB	DWM	02.18.021	Z	, 12
42	South River - Immediate Operational Improvements		5		4/20/2007	1,545	WSRB	DWM	02.18.901	C	12
43	South River - Future Operational Improvements		5		4/21/2007	2,554	WSRB	DWM	02.18.902	C	, 12
44	Utoy Creek - Onsite Sewer Evaluations		5		3/21/2006	600	WSRB	DWM	02.19.901	H	0
45	Utoy Creek - Safety Upgrades		5		1/21/2004	150	WSRB	DWM	02.19.902	H	0
46	Utoy Creek - Immediate Operational Improvements		5		7/21/2006	482	WSRB	DWM	02.19.904	H	0
47	Utoy Creek - Future Operational Improvements		5		7/18/2006	1,228	WSRB	DWM	02.19.905	H	0
48	Relief Sewer - Group 1		5	15	12/29/2008	98,272	WSRB	DWM	04.16.300	all	all
49	Rehabilitation - Group 2		5		5/13/2010	18,061	WSRB	DWM	04.17.200	all	all
50	Relief Sewers - Group 2		5	15	11/1/2010	88,445	WSRB	DWM	04.17.300	all	all
51	SSES - Group 3		5		6/28/2007	21,104	WSRB	DWM	04.18.001	all	all

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
52	Rehabilitation - Group 3		5		11/6/2010	17,058	WSRB	DWM	04.18.200	all	all
53	Relief Sewers - Group 3		5	15	5/17/2010	83,531	WSRB	DWM	04.18.300	all	all
54	SSES - Group 4		5		10/28/2008	19,862	WSRB	DWM	04.19.001	all	all
55	Rehabilitation - Group 4		5	15	1/12/2012	16,055	WSRB	DWM	04.19.200	all	all
56	Relief Sewers - Group 4		5	15	9/19/2011	78,617	WSRB	DWM	04.19.300	all	all
57	SSES - Group 5		5		2/22/2010	18,621	WSRB	DWM	04.20.001	all	all
58	Rehabilitation - Group 5		5	15	2/7/2013	15,051	WSRB	DWM	04.20.200	all	all
59	Relief Sewers - Group 5			15	11/6/2012	73,704	WSRB	DWM	04.20.300	all	all
60	SSES - Group 6		5		5/1/2010	17,380	WSRB	DWM	04.21.001	all	all
61	Rehabilitation - Group 6			15	1/11/2014	14,048	WSRB	DWM	04.21.200	all	all
62	Relief Sewers - Group 6			15	6/13/2013	68,790	WSRB	DWM	04.21.300	all	all
63	Stockade Trunk Interim Sewer Project - Near Confederate CSO		5		3/28/2006	5,127	WSRB	DWM	05.18.202	W	1
64	McDaniel Street Landscaping		5		9/11/2007	1,105	WSRB	DWM	05.87.101	X	12
65	IC CSO Bar Screen Repair		5		1/1/2006	1,500	WSRB	DWM	05.87.302	W	1
66	Sewer Separation - Long Term			15	2/8/2012	266,000	WSRB	DWM	05.91.001	D, E, F, K, L, M, N, S, T, V, W, X	1, 2, 3, 4, 5, 6, 7, 8, 12
67	MWH/Khafra Program Management Year 2004 - Year 2014 - Capital Projects		5	15	4/28/2015	20,785	WSRB	DWM	06.02.903	all	all
68	MWH/Khafra Program Management Year 2004 - Year 2014 - Capital Projects		5	15	4/28/2015	20,520	WSRB	DWM	06.02.905	all	all

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
69	MWH/Khafra Program Management Year 2002 - Year 2014 - Capital Projects		5	15	4/27/2015	10,167	WSRB	DWM	06.02.911	all	all
70	MWH/Khafra Program Management Year 2004 - Year 2014 - Capital Projects		5		4/28/2015	26,966	WSRB	DWM	06.02.915	D, E, F, K, L, M, N, S, T, V, W, X, Y	1, 2, 3, 4, 5, 6, 7, 8, 12
71	Overall Watershed Long Term Monitoring		5		11/7/2007	7,500	WSRB	DWM	06.0D.2B0	D, E, F, K, L, M, N, S, T, V, W, Y	1, 2, 3, 4, 5, 6, 7, 8
72	Watershed Management Planning - MAWUI		5		11/7/2007	500	WSRB	DWM	06.0D.2B1	E, F, K, L, M, N, S, T, V, W, X, Y	1, 2, 3, 4, 5, 6, 7, 8
73	Site Specific Water Effects Ratio (WER) Study - Federal Grant Request		5		12/29/2006	500	WSRB	DWM	06.0D.2C0	all	all
74	Bio-Solids Project		5		3/18/2009	60,000	WSRB	DWM	07.79.001	all	all
75	Pipe Bursting Annual Contract (Y2002 to Y2004)		5		1/21/2006	13,000	WSRB	DWM	08.02.001	all	all
76	Cured-in-place (Insituform) Annual Improvements Contract (Y2002 to Y2004)		5		1/21/2006	20,000	WSRB	DWM	08.02.002	all	all
77	Pipe Bursting Annual Contract (Y2005 to Y2014)		5	15	12/29/2014	22,000	WSRB	DWM	08.03.001	all	all
78	Cured-in-place (Insituform) Annual Improvements Contract (Y2005 to Y2014)		5	15	12/29/2014	44,000	WSRB	DWM	08.03.002	all	all

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
79	Proctor/Sandy Creek System Improvements		5		12/21/2006	10,413	WSRB	DWM	09.01.901	K	9, 10
80	New 30" Transmission Main (PS to S. River WRC)		5		4/20/2007	33,000	WSRB	DWM	09.02.004	Z	2
81	Flint River Transmission Main Improvements		5		4/20/2007	5,414	WSRB	DWM	09.02.901	Z	2
82	IC & SR - Effluent Forcemain Assessment & Establishment of Permanent ROW		5		12/21/2006	2,281	WSRB	DWM	09.04.001	Y, Z	12
83	City Program Management Staff - Year 2004 to Year 2014 - Capital Projects		5		12/28/2014	11,289	WSRB	DWM	99.01.006	S, T, V, W, X, Y	2
84	City Program Management Staff - Year 2004 to Year 2014 - Capital Projects		5	15	12/28/2014	10,715	WSRB	DWM	99.01.010	all	all
85	City Program Management Staff - Year 2004 to Year 2014 - Capital Projects		5	15	1/28/2015	6,461	WSRB	DWM	99.01.013	all	all
86	City Program Management Staff - Year 2002 to Year 2014 - Non-Capital Projects		5	15	1/28/2015	3,160	WSRB	DWM	99.01.014	all	all
87	Contingency - CSO - Assumed 5% of Subtotal (+/-)		5		1/30/2008	51,198	WSRB	DWM	99.02.005	all	all
88	Contingency - SSO - Assumed 5% of subtotal (+/-)		5	15	1/28/2015	48,617	WSRB	DWM	99.02.006	all	all
89	Contingency - Regulatory - Assumed 5% of Subtotal (+/-)		5	15	1/28/2015	13,595	WSRB	DWM	99.02.007	all	all
90	Contingency - Renewal and Extension - Assumed 5% of Subtotal (+/-)		5	15	1/28/2015	28,923	WSRB	DWM	99.02.008	all	all

CURRENT CONDITIONS: STORMWATER MANAGEMENT

The City of Atlanta is required by the Environmental Protection Agency (EPA) and the Georgia Environmental Protection Division (EPD) to address water pollution associated with stormwater runoff in the City. It is a fact that stormwater runoff is a major contributor of pollutants to the many creeks and rivers in the metro area. In addition to pollution control requirements, the City faces significant improvements for flood controls.

The City intends to create a stormwater management utility and establish a stormwater utility fee to pay for the City's share of costs for stormwater pollution prevention and flood control projects. Stormwater related pollution abatement programs are estimated to cost greater than $300 million in the next few years.

As part of this program the City will initiate programs to monitor stormwater for pollutants, improve stormwater system maintenance, and provide educational activities to individuals, businesses and agencies impacting stormwater.

The City must adopt a Stormwater Ordinance establishing standards for keeping stormwater clean. Best Management Practices (BMPs) for specific areas such as residential, retail, industrial, and construction activities will be studied, developed, and implemented. In combination, these programs will reduce stormwater pollution. These activities support the goal of the City to minimize the pollutants from the City storm drain system entering the Chattahoochee and Ocmulgee River Basins.

Anticipated Services of the Stormwater Utility include, but are not limited to the following:

- Customer services
- Public information
- General engineering services
- Planning
- NPDES Storm Water Permit compliance
- Management of capital improvement programs
- Construction and maintenance
- Street cleaning
- Streambank stabilization
- Flooding mitigation/floodplain acquisition

The stormwater utility will provide a dedicated revenue source for stormwater management. The stormwater utility will operate similarly to water or sewer charges which are funded through service fees and administered separately from the general fund ensuring stable and adequate support for these public services.

Based on engineering estimates for over 3,300 complaint investigations, the City has approximately $56 million in capital improvements in stormwater projects for 10 watershed basins (Utoy, Terrell, Sugar, South River, Proctor, Peachtree, Nancy, Intrenchment, Indian and Federal Prison Creeks). These improvements predominantly consist of problems such as erosion, flooding, and drainage. The capital improvements do not relate to

upstream/downstream corrections or water quality benefits. Further engineering assessments are needed within the entire City limits for stormwater capital improvements. The City issued a bond in 1994 totaling $54 million for stormwater improvements. By the end of 2004, the City will begin a master planning effort to identify and prioritize stormwater improvements. In addition, the City will be continually working with the US Army Corps of Engineers in the assessment of stormwater impacts and drainage basins.

To develop the stormwater utility, the City of Atlanta will be implementing the necessary steps to make certain that the utility is executed in 2004.

SOLID WASTE

CURRENT CONDITIONS: SOLID WASTE

The Bureau of Solid Waste Services in the Department of Public Works provides solid waste collection and disposal for residences. Approximately 300,000 tons of residential waste and wastewater sludge must be disposed of annually.

The City has successfully completed the design and construction of the consent ordered closure of its three sanitary landfills and one construction and demolition landfill. The Georgia Department of Natural Resources (Environmental Protection Division) has issued to the City "Closure Certifications" for these landfills. Map 10-3 shows the location of these closed facilities.

ANTICIPATED FUTURE CONDITIONS: SOLID WASTE

Increased capital expenditures are anticipated during the post closure period for site maintenance and upgrades to installed monitoring equipment and systems. Additional capital expenditures may also be required for design, construction and/or purchase of solid waste management facilities such as transfer stations and landfills, as well as future use of closed facilities. It is increasingly important in the near future that the Department of Public Works and Solid Waste Management begin to plan for the disposal and collection of household hazardous wastes as well as a scrap tire management program. In addition, the City will need to review ordinances on recycling for single and multi-family dwellings as well as address recycling needs in City owned facilities.

It is anticipated that the City, through the Solid Waste Management Authority (SWMA) (an organization established through state law in 1994), will seek to obtain financing for solid waste capital projects.

CURRENT POLICIES: SOLID WASTE

THE CITY'S SOLID WASTE MANAGEMENT PLAN

The Comprehensive Solid Waste Management Plan, adopted by the City in 1995, includes new as well as existing measures to reduce the quantity of waste to be landfilled. These measures include waste stream reduction, recycling, and the processing of yard trimmings and wood waste. Since 1990, the waste stream has been reduced by approximately 26 percent. This reduction may be attributed to the Yard Trimmings Diversion Program, the Curbside Recycling Program, and increased expenditures for public education.

The Comprehensive Solid Waste Management Plan will be subject to future updates. The following elements present a summary of the Plan.

Element One - Quantity of Was**te**

Sources: Solid Waste from residential units is collected from two primary sources, single-family and multifamily residences. The City services approximately 87,000 single family and 65,000 multifamily units weekly. Almost 23 percent of the residential waste stream is yard trimmings. Twenty-eight percent is composed of the different categories of paper.

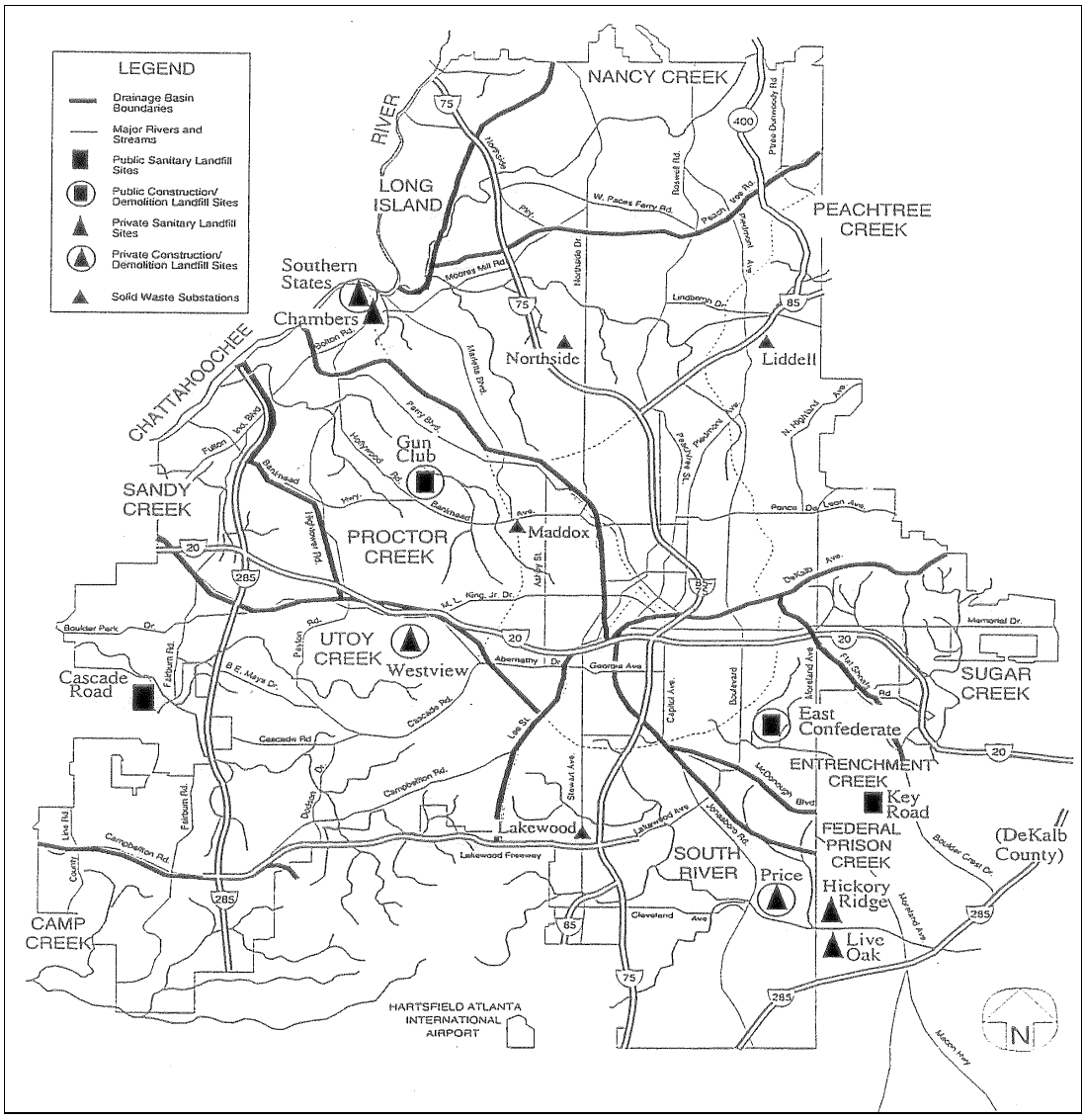
Private hauling companies collect the commercial, non-residential waste stream, which also includes construction/demolition waste.

The quantity of waste generated by industrial processes in Atlanta is relatively small and is handled entirely by private haulers and disposal facilities.

Element Two - Collection

Service Area: Atlanta has an area of 131.6 square miles. The Bureau of Sanitary Services billings indicate approximately 87,000 single family and 65,000 multifamily units receive collection services.

Map 10-3: Landfill Sites



Private and Public Collection System: The City, through its Department of Public Works, collects single family residential waste generated in the City. Commercial, industrial, construction and demolition wastes are collected by private companies. There are some minor exceptions to this division of the waste collection. The City does not currently offer collection of commercial solid waste within its boundaries but reserves the right to regulate its collection by private haulers if required to insure sanitary conditions within the City limits. Haulers may be required to report annually, the amount of waste and recyclables collected within the City limits.

Element Three - Waste Reduction

Source Reduction: The City has established a Solid Waste Information Program. This program is operated as a continuation of the existing informational programs run by the Bureau of Solid Waste Services in connection with the City's curbside recycling program. It is anticipated that the Waste Reduction Informational Program will continually evolve

to provide information on the latest improvements and newest methods in solid waste management.

Reuse: Reuse is a waste reduction method that utilizes items in the waste stream normally discarded and disposed of in the landfill. The City will study alternative reuse and disposal methods in the future.

Residential Recycling: The City provides curbside recycling service to approximately 87,000 households zoned R-1. The City expects that the amount of waste removed due to better promotion, information distribution, effects of educational programs, and an expansion in the categories of recyclables collected (drop-off centers for magazines and corrugated) will result in a waste reduction of about 2.9 percent of base year disposal (7.61 percent of residential waste). The City's curbside program will initially serve only the single-family residences that generate about 51.5 percent of the waste and recyclables. At this time, the recycling service does not extend to multi-family areas.

If deemed necessary to meet state requirements, or as desired by the City, programs may be further expanded to initially encourage and then to require waste reduction. It is anticipated that any of these programs would be carefully considered and examined for their impact upon the cost to businesses and effectiveness of waste reduction. The City will seek the counsel of the Atlanta Chamber of Commerce and others in the business community to develop plans for information gathering about commercial waste collection.

Yard Trimmings - Processing: As allowed by the Solid Waste Management Act, the City has enacted restrictions on disposal of yard trimmings that are consistent with the Yard Trimmings Diversion Program. Through this program, the City provides for the separate collection of yard trimmings as required by current state regulations.

Element Four - Disposal

Landfill Utilization: The residential waste collected by the City is disposed of at Live Oaks Landfill under contract. The required ten year disposal capacity for all waste generated in the City is provided under the City's Live Oak disposal contract. No expansion of the landfill is needed for the certified capacity required for the City's waste disposal needs.

Existing Facilities - Planned and Projected: No disposal facilities are operated by the City. There is one private municipal solid waste (MSW) landfill operating within the city limits—Waste Management’s Bolton Road facility.

Element Five - Land Limitations

Natural Environmental Limitations: When considering the location of all solid waste handling facilities including landfills, the following will be considered, according to state planning guidelines: floodplains, wetlands, and groundwater recharge areas. The City will also consider other criteria such as water supply watersheds, fault zones, seismic impact zones, and unstable areas (karst areas).

Land Use Plan/Zoning Restrictions: Zoning restrictions that presently affect the City are found in the Atlanta Zoning Ordinance as amended 1982. Table 10-6 identifies the zoning restrictions for private solid waste management facilities.

Table 10-6: Zoning Restrictions for Private Solid Waste Management Facilities

Facility	Zones Allowed	Zones Allowed by Special Permit
Construction/Demolition Disposal		R-1, R-2, R-3, R-4, R-5
Inert Waste		R-1, R-2, R-3, R-4, R-5
Sanitary Non-Hazardous		I-1, I-2
Recycling Incidental to Other Activities	In zone of main enterprise	
Stand Alone Operations Processing, Transfer, Storage		I-1, I-2
Thermal Treatment	Not Addressed	Not Addressed

Source: City of Atlanta Bureau of Sanitary Services

Element Six - Education and Public Involvement

The City has implemented the education programs as outlined in Element Six of its solid waste management plan. A waste reduction information program is also a part of the education component of the plan.

Element Seven – Solid Waste Implementation Strategy

The Atlanta Regional Commission (ARC) and the Department of Community Affairs (DCA) provided letters to the City of Atlanta verifying that the City's Solid Waste Management Plan complied with other local and state Solid Waste Management Plans and state minimum planning standards. City Council then adopted the Solid Waste Management Plan September 5, 1995.

2004 CDP ENVIRONMENTAL FACILITIES CURRENT PROGRAMS AND PROJECTS – SOLID WASTE

Project List 10-7: 2004 CDP Environmental Facilities Current Programs and Projects – Solid Waste

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
1	Chester Avenue Sanitary Services Substation Renovation		5		2005	200	SWMA, Bond Fund,	Dept. of Public Works	SS15	W	5
2	Post Closure of Cascade Road Landfill	1	5		2030	2000	SWMA, Bond Fund, GEFA	Dept. of Public Works	n.i.	out	out
3	Post Closure of Gun Club Landfill	1	5		2030	2000	SWMA, Bond Fund, GEFA	Dept. of Public Works	n.i.	G	9
4	Post Closure of Key Road I Landfill	1	5		2030	2000	SWMA, Bond Fund, GEFA	Dept. of Public Works	n.i.	out	out
7	Key Road II Sanitary Landfill Development (over 30 year period)	1	5	15	2015	87000	Bond Fund, CDBG	Dept. of Public Works	n.i.	out	out
8	Lidell Drive Snaitary Services Substation Renovation (BSS)	1			2003	3200	Bond Fund, CDBG	Dept. of Public Works	SS14	F	6
9	Northside Drive Substation Renovation		5		2003	1500	Bond Fund, CDBG	Dept. of Public Works	n.i.	D	8
10	Northside Solid Waste Transfer Station			15	2005	7650	Bond Fund, CDBG	Dept. of Public Works	SS05	D	8
11	Purchase and construction of Landfill Sites (BSS)		5	15	2004	44000	Bond Fund, CDBG	Dept. of Public Works	SS02	all	all
12	Renovation,Construction and Maintenance of Substation (BSS)		5		2005	375	Bond Fund, CDBG	Dept. of Public Works	SS15	A, H	8, 10

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
13	Replacment of Refuse (Mobile) (BSS)	1	5		2005	2150	Bond Fund, CDBG	Dept. of Public Works	n.i.	all	all
14	Southeast Solid Waste Transfer Station			15	2005	5350	Bond Fund, CDBG	Dept. of Public Works	SS05		
15	Grass Cutting Code Enforcement Program		5	15	2015	6000	Bond Fund, CDBG		n.i.	all	all
16	Yard Trimmings Collection	1	5		2005	1111	Bond Fund, CDBG	Dept. of Public Works	n.i.	all	all
17	Yard Trimmings Processing	1	5		2005	2654	Bond Fund, CDBG	Dept. of Public Works	n.i.	all	all

2004 CDP ENVIRONMENT FACILITIES NEW PROGRAMS AND PROJECTS – SOLID WASTE

Project List 10-8: 2004 CDP Environment Facilities New Programs and Projects – Solid Waste

Environmental Facilities	Description	Initiation Year			Completion Year	COST x 1,000	Funding Source	Responsible Party	CIP #	NPU	CD
		1	5	15							
1	Household Hazardous Waste and Scrap Tire Program	1	5	15	2017			Dept. of Public Works	n.i.	all	all
2	CFC Recovery and Citizen Drop off Facility	1			2004	500	SWMA, GEFA	Dept. of Public Works			
3	Post Closure of East Confederate Landfill				2030	1000	SWMA, GEFA			W	5